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Serial no. 10/736,155 - Hatfield et al.

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In the Claims

Amend claims 1-4, 7, 9, 10, and 12, as follows:

1. (currently amended) A method for the reduction of proteolysis in ensiled crops by comprising contacting the a crop material to be ensilaged with an o-diphenol compound and polyphenol oxidase at the time of ensilaging in sufficient quantity an amount effective to reduce the degree of proteolysis of the ensilaged the crop material.

2. (currently amended) The method of claim 1 wherein the quantity amount of said o-diphenol and said polyphenol oxidase is sufficient to reduce the degree of proteolysis by at least 20%.

3. (currently amended) The method of claim 1 wherein the o-diphenol compound is applied to the crop material to be ensilaged at a rate ranging from about 5 to about 30 micromoles per gram fresh weight and the polyphenol oxidase is applied to the crop material to be ensilaged at a rate ranging from about 0.1 to about 1.0 unit per gram fresh weight.

4. (currently amended) The method of claim 1 wherein the crop material to be ensilaged material is macerated to a conditioning index ranging from 30 to 60.

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5. (previously presented) The method of claim 1 wherein the α -diphenol compound is selected from the group consisting of caffeic acid, catechol, chlorogenic acid, phasic acid, rosmarinic acid, caffeoyl tartrate, and caffeoyl glucose.

6. (original) An ensilaged material prepared by the process of claim 1.

7. (currently amended) A method for the reduction of proteolysis in ensiled crops by comprising contacting a PPO polyphenol oxidase transformed crop to be ensilaged with an α -diphenol compound at the time of ensilaging in a sufficient quantity an amount effective to reduce the degree of proteolysis in the ensilaged material crop.

8. (previously presented) The method of claim 7 wherein the quantity of said α -diphenol compound is sufficient to reduce the degree of proteolysis by at least 20%.

9. (currently amended) The method of claim 7 wherein the α -diphenol compound is applied to the crop to be ensilaged at a rate ranging from about 5 to about 30 micromoles per gram of fresh material weight.

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10. (currently amended) The method of claim 7 wherein the crop to be ensilaged material is macerated to a conditioning index ranging from about 30 to about 60.

11. (previously presented) The method of claim 7 wherein the o-diphenol compound is selected from the group consisting of caffeic acid, catechol, chlorogenic acid, phasic acid, rosmarinic acid, caffeoyl tartrate, and caffeoyl glucose.

12. (currently amended) An ensilaged material crop prepared by the process of claim 7.